



Research Article

The Effect of Patient Relaxation on Anxiety Levels in Postoperative Patients at RSMN Bitung

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Abstract. Anxiety is a prevalent psychological condition in postoperative patients. Pain, discomfort, limited activity, health-related worries, and the rehabilitation process can all cause anxiety. Patient relaxation is a non-pharmacological strategy that can help alleviate anxiety. The purpose of this study is to see how patient relaxation affects anxiety levels in postoperative patients at RSMN Bitung. This study employed a quantitative design using a pre-experimental method based on a one-group pretest-posttest design. The sample comprised of 55 respondents chosen using the purposive selection approach. Anxiety questionnaires were administered before and after patient relaxation. Data was analyzed using univariate and bivariate Wilcoxon tests with SPSS. The findings revealed that the majority of respondents, 32 (58.2%), reported moderate anxiety before to relaxation, whereas the majority of respondents, 29 (52.7%), experienced mild anxiety following relaxing. The Wilcoxon test returned a p-value of 0.000. The study concluded that patient relaxing reduces anxiety in postoperative patients at RSMN Bitung.

Keywords: Anxiety; Non-Pharmacological Therapy; Patient Relaxation; Postoperative Patients; RSMN Bitung.

1. Background

During recovery period, postoperative patients often experience anxiety. Anxiety may be caused by pain, changes in their body condition, limited activity, the hospital setting, and concerns about their surgical outcomes. Anxiety can interfere with rest, comfort, and the healing process if not properly managed. A non-pharmacological intervention, patient relaxation can help reduce anxiety by helping patients regulate breathing, calm the mind, and reduce body tension. It is simple and easy to do, and it can be part of nursing care.

RSMN Bitung is responsible for delivering postoperative care services to patients, which includes fulfilling both their physical and psychological requirements. Therefore, this study was undertaken to assess the effect of patient relaxation on anxiety in postoperative patients at RSMN Bitung. Anxiety in postoperative patients is one of the most frequent psychological issues in healthcare settings worldwide. The World Health Organization highlights that patients' mental health in hospitals has a direct impact on physical recovery, duration of stay, and risk of postoperative problems. Unmanaged anxiety can stimulate sympathetic nervous system activity, resulting in more pain and sleep problems (WHO, 2024).

In Indonesia, pharmaceutical therapy remains the dominant method of anxiety management in postoperative patients, whereas non-pharmacological approaches are not yet fully established in hospitals. The Ministry of Health of the Republic of Indonesia emphasizes the necessity of improving holistic nursing care, which includes psychological elements. Patient relaxation, a basic non-pharmacological treatment, has been extensively researched and found beneficial in lowering anxiety. Therefore, this study is necessary to examine the effect of patient relaxation on anxiety in postoperative patients at RSMN Bitung.

2. Theoretical Review

Anxiety is an emotional response that occurs when a person is concerned, fearful, or uneasy about a present or upcoming situation. Anxiety in postoperative patients may emerge as a result of pain, uncertainty about recovery, surgical experience, and limited activity following the treatment. Patient relaxation is a practice that assists patients in achieving a

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calmer body and mental state. Deep breathing, muscular relaxation, pleasant positions, and guided thinking can all help patients feel more peaceful. Relaxation relieves tension and increases comfort.

In theory, patient relaxation can reduce anxiety by triggering a calmer bodily reaction, lowering muscular tension, and assisting patients in managing their stress. Patients who are more calm are better able to recuperate from their surgeries.

Anxiety is an emotional response to perceived dangers that is characterized by increased tension, anxiety, and autonomic nervous system activity. Postoperative patients frequently experience anxiety as a result of pain, uncertainty about surgery outcomes, limited movement, and the hospital atmosphere. According to the American Psychological Association (2024), anxiety can interfere with physiological body functioning and impede the healing process.

Patient relaxation is a non-pharmacological strategy for lowering physical and mental stress that involves breathing control, muscular relaxation, and mental focus. This approach activates the parasympathetic nervous system, lowering heart rate, blood pressure, and stress levels. Mashhadi-Naser et al. (2024) and Widiyawati et al. (2024) found that relaxation techniques can help reduce anxiety in surgical patients, especially postoperative patients.

3. Research Method

This study employed a quantitative design using a pre-experimental method based on a one-group pretest-posttest design. The study took place at RSMN Bitung from March to May of 2026. This design was utilized to examine anxiety levels before and after patient relaxation in the same group of participants. The participants in this study were postoperative patients at RSMN Bitung. The sample comprised of 55 respondents chosen by purposive sampling. Postoperative patients who were willing to participate, completely cognizant, able to talk adequately, and not in need of emergency care were eligible. An anxiety questionnaire was utilized as the study tool. The independent variable was patient relaxation, whereas the dependent variable was anxiety in postoperative patients. The Wilcoxon test was used using SPSS to do univariate and bivariate analyses on the data. A p-value of <0.05 indicates a significant effect.

4. Results And Discussion

Respondent Characteristics

Table 1 presents respondent characteristics, including age, gender, education, occupation, and postoperative day. This data is used to describe the baseline condition of the patients who were the study subjects.

Table 1. Distribution of Respondent Characteristics at RSMN Bitung.

Characteristics	Category	Frekuensi	N	Persentase %
Age	< 30 years	9		16.4
	30–45 years	28		50.9
	> 45 years	18		32.7
Gender	Male	24		43.6
	Female	31		56.4
Education	Basic	12		21.8
	Secondary	32		58.2
	Higher	11		20.0
Occupation	Working	30		54.5
	Not working	25		45.5
Postoperative day	Day 1	29		52.7
	Day 2	26		47.3
Total		55		100

Source: Processed primary data, 2026.

Based on Table 1, the majority of respondents were aged 30 to 45 years (28 respondents) (50.9%). This age group indicates that most patients are in their productive adult years, so their response to surgery and the recovery process can be influenced by physical condition, activity, and social role burden. The majority of respondents were female (31 respondents) (56.4%), and 32 respondents had secondary education (58.2%). In addition, the majority of respondents were employed (30 respondents) (54.5%), and were on the first postoperative day (29 respondents) (52.7%). The characteristics of the first postoperative day are important to note because during this phase, patients often still experience pain, limited mobility, discomfort, and uncertainty about the recovery process, which can increase anxiety.

Anxiety Level Before Relaxation

Table 2 shows the distribution of patients' anxiety levels before receiving relaxation. This data provides an initial overview of the respondents' psychological state during post-operative recovery.

Table 2. Distribution of Patients' Anxiety Before Relaxation.

Anxiety Level	Frekuensi n	Persentase %
Mild	7	12.7
Moderate	32	58.2
Severe	16	29.1
Total	55	100

Source: Processed primary data, 2026.

Based on Table 2, before patient relaxation was given, the majority of respondents experienced moderate anxiety (32 respondents (58.2%). Respondents with severe anxiety were 16 respondents (29.1%), while 7 respondents (12.7%) had mild anxiety. These results indicate that anxiety remains a dominant psychological problem among postoperative patients at RSMN Bitung. This condition can be influenced by surgical wound pain, activity limitations, fear of complications, concerns about the healing process, and adaptation to the care environment. These findings reinforce the need for non-pharmacological interventions that can help patients achieve a calmer state during recovery.

Anxiety Level After Relaxation

Table 3 shows the distribution of patient anxiety levels after relaxation. These data demonstrate changes in anxiety levels after non-pharmacological interventions.

Table 3. Distribution of Anxiety After Patient Relaxation.

Anxiety Level	Frekuensi n	Persentase %
No anxiety	9	16.4
Mild	29	52.7
Moderate	14	25.5
Severe	3	5.5
Total	55	100

Source: Processed primary data, 2026.

Based on Table 3, after patient relaxation, the majority of respondents experienced mild anxiety (29 respondents (52.7%). Nine respondents (16.4%) experienced no anxiety, while moderate anxiety decreased to 14 respondents (25.5%) and severe anxiety decreased to 3 respondents (5.5%). These changes indicate a shift in anxiety levels to a lower category after the intervention. Patient relaxation can help respondents regulate their breathing, reduce muscle tension, shift focus away from anxiety, and increase feelings of comfort. Thus, relaxation can support patients' psychological stability during the postoperative recovery process.

Effect of Patient Relaxation on Anxiety

Table 4 presents the results of the analysis of the effect of patient relaxation on postoperative anxiety. This table includes the mean, standard deviation, median, score range, and significance value of the Wilcoxon test results.

Table 4. The Effect of Patient Relaxation on Post-Operative Patient Anxiety.

Variable	Mean	SD	Median	Min–Max	p-value
Before relaxation	27.31	4.86	27	18–38	0.000
After relaxation	18.02	4.37	18	10–30	
Difference	9.29				

Source: Processed primary data, 2026.

Based on Table 4, the average anxiety score before patient relaxation was 27.31 and decreased to 18.02 after the intervention. The average difference in the decrease of 9.29 indicates a decrease in anxiety scores after patient relaxation was administered. This decrease is clinically significant because it indicates that patients became calmer and better able to control their emotional responses during the postoperative period. The Wilcoxon test results obtained a p value of 0.000, indicating that there was a statistically significant effect of patient relaxation on postoperative patient anxiety at RSMN Bitung. These results indicate that patient relaxation can be used as a non-pharmacological support intervention in nursing care, while still considering pain conditions, ability to follow instructions, and patient safety.

Discussion

According to the findings, the majority of respondents had considerable anxiety prior to relaxing. This syndrome is characterized by postoperative discomfort, restricted mobility, and psychological anxieties regarding the recovery from surgery. Anxiety levels fell to a modest

level following the relaxation technique. This suggests that relaxation practices might help patients feel calmer and minimize psychological strain during their recovery time.

Patient relaxation works by lowering sympathetic nervous system activity and boosting parasympathetic activity, resulting in a calmer physiological state and a lower stress reaction. The statistical test yielded $p = 0.000$, indicating a substantial effect of patient relaxation on postoperative anxiety. This technique is suitable for clinical nursing practice since it is easy, safe, and does not incur additional costs, while also improving patient comfort and psychological stability.

5. Conclusion

This study suggests that patient relaxing reduces anxiety in postoperative patients at RSMN Bitung. Anxiety levels reduced following intervention, depending on category and mean score. Patient relaxation can serve as a non-pharmacological supportive intervention in postoperative treatment. Hospitals should improve teaching and use of relaxing strategies in nursing practice.

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